

Attorney's Docket No.: 10559-515001/P12419  
Intel Corporation

**REMARKS**

Claims 1-42 are pending. No claim amendments are made at this time.

In the action mailed August 4, 2005, the title was objected to as not being descriptive. The title has been amended to refer to "Breakpoint Handling at Peripherals."

Applicant thanks the Examiner for the courtesy of faxing a copy of the dictionary definitions cited in the action mailed August 4, 2005.

Claims 1-27, 29-30, 32-33, 35-36, 38-40, and 42 were rejected under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 4,502,116 to Fowler et al. (hereinafter "Fowler") and U.S. Patent No. 5,956,514 to Wen et al. (hereinafter "Wen").

The rejections contend that Fowler and Wen involve peripherals. In particular, the rejections contend that processors within a multiprocessor system are "peripherals." In support of this contention, the rejection cites definitions of "peripherals" and "auxiliary" found in the 4<sup>th</sup> Edition of the American Heritage Dictionary of the English Language as allegedly supporting the contention that processors within a multiprocessor system are "peripherals." The cited definitions are as follows:

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peripheral: an auxiliary device, such as a printer, modem, or storage system, that works in conjunction with a computer; and

auxiliary: giving assistance or support; helping.

Applicant respectfully disagrees and submits that it is unreasonable to interpret processors within a multiprocessor system to be "peripherals." In support of thereof, attention is respectfully directed to both the usage of the term "peripheral" intrinsic to Applicant's specification and the cited extrinsic dictionary definitions of "peripherals" and "auxiliary."

Applicant's own specification makes it clear that "peripherals" do not include the processors within a multiprocessor system. For example, the text repeatedly designates "processors" independently of "peripherals." Page 1, line 5-7 of the specification is illustrative and describes that a "SOC may include digital components such as independent processors and peripherals configured to interact with one another." An interpretation of "peripherals" to include "processors" would render this text awkward at best and nonsensical at worst. Under such an interpretation, the text could describe that a SOC may include digital components such as independent processors and processors.

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Please note that "processors" and "peripherals" are designated independently at numerous locations throughout the specification. See, e.g., page 1, line 17-19 ("After stepping through the breakpoint handler to isolate the problem, the processors and peripherals are restarted."), page 1, line 19 page 2, line 2 ("However, the internal architecture of a typical SOC lacks the ability to effectively stop and restart multiple independent processors and peripherals without the experiencing loose of synchronization among the components in the SOC."), page 2, line 12-14 ("The SOC 14 can contain electronic components such as multiple independent processors 26, peripherals 24,..."), page 3, line 5-7 ("The programs may include instructions that can be executed by the processors to allow the processors to interact with the peripherals."), page 3, line 10-13 ("The debugging tool 16 can set an instruction or data breakpoint condition and monitor the execution of the breakpoint condition by using the handshaking circuit to select one or more processors or peripherals in the SOC 14."), and page 3, line 13-17 ("Once the breakpoint is encountered, the tool in conjunction with the handshaking circuit, can halt execution of the selected processors and peripherals and preserve the state of the processors and the peripherals.")

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The drawings also independently designate peripherals and processors. In particular, FIG. 1 clearly shows processors 26 as independent of peripherals 24.

These and other instances clearly indicate that "peripherals" do not include "processors." Any interpretation of the term "peripherals" to the contrary violates the approach to claim construction recently set forth by the Federal Circuit. In particular, a "fundamental rule of claim construction is that terms in a patent document are construed with the meaning with which they are presented in the patent document. Thus claims must be construed so as to be consistent with the specification, of which they are a part." See *Phillips v. AWH Corporation*, Nos. 03-1269, -1286, U.S. App. LEXIS 13954 (Fed. Cir. 2005) (citing *Merck & Co. v. Teva Pharms. USA, Inc.*, 347 F.3d 1367, 1371 (Fed. Cir. 2003)).

Since an interpretation of "peripherals" to include processors in a multiprocessor system is inconsistent with the usage of the term "peripherals" in the specification, such an interpretation is improper. Accordingly, such an interpretation is not reasonable.

Although the specification is the "single best guide" to the meaning of a term and "a general-usage dictionary cannot overcome art-specific evidence of the meaning" of a claim term,

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the dictionary definitions cited in the rejection bear comment. In particular, Applicant submits that the cited definitions provide further support for the contention that it is unreasonable to consider processors within a multiprocessor system to be "peripherals."

To begin with, it is believed to be self-evident that a processor within a multiprocessor system is not "a printer, modem, or storage system." The rejection thus appears to rely upon the remaining language in the cited definition. Namely, the rejection asserts that a processor within a multiprocessor system is "an auxiliary device ... that works in conjunction with a computer."

Such an assertion neglects the fact that multiprocessor systems are unitary systems, i.e., the individual processors are fully integrated into a single multiprocessor "computer." Fowler and Wen are illustrative of this point. Their individual processors are fully integrated into multiprocessor systems. Indeed, both Wen and Fowler indicate that successful computation is performed only in the absence of a fault in any one of the individual integrated processors. The individual processors thus are not "auxiliary," nor do they work "in conjunction with" a computer. Rather, the individual processors are integrated constituents of the multiprocessor computers.

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Support for this contention can be found in both Fowler and Wen. For example, Fowler describes a multiprocessor system that executes a *single* application using the multiple processors. See col. 9, line 23-28. Further, interruption at a single processor in the multiprocessor system can lead to other processors erroneously interrupting their own processing. See col. 1, line 39-57. Likewise, Wen describes that a single body of application software is to be operated on by several processors in his multiprocessor system. See, e.g., col. 2, line 48-50 and col. 3, line 36-38.

Since both Wen and Fowler describe that the individual processors in their multiprocessor systems are jointly and integrally involved in the performance of a single set of computations, Applicant submits that the individual processors are part of Fowler's and Wen's multiprocessor "computers." Indeed, both Wen and Fowler indicate that successful computation is performed only in the absence of a fault in any one of the individual integrated processors. As such, the remaining processors are not, by themselves, "computers" that are capable of meaningful computation. The individual processors thus are not "auxiliary," nor do they work "in conjunction with" a computer.

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Thus, an interpretation of "peripherals" to include processors in a multiprocessor system is inconsistent with both the usage of the term peripheral in the specification and the dictionary definitions cited by the rejection. Such an interpretation is thus not reasonable.

As discussed in the response filed May 23, 2005, every independent claim defines a relationship to peripherals. Since neither Fowler nor Wen involve peripherals, applicant submits that the rejections of claims 1-42 are improper as not describing or suggesting elements and/or limitations from the claims. Accordingly, claims 1-42 are patentable over Fowler and Wen.

Applicant asks that all claims be allowed. No fees are believed due at this time. Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

BY

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Date: October 4, 2005

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